ROTEL

Owner's Manual

RX-1050

AM/FM Stereo Receiver

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR THE USAGE

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT. INSERT FULLY.

ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU AU FOND.
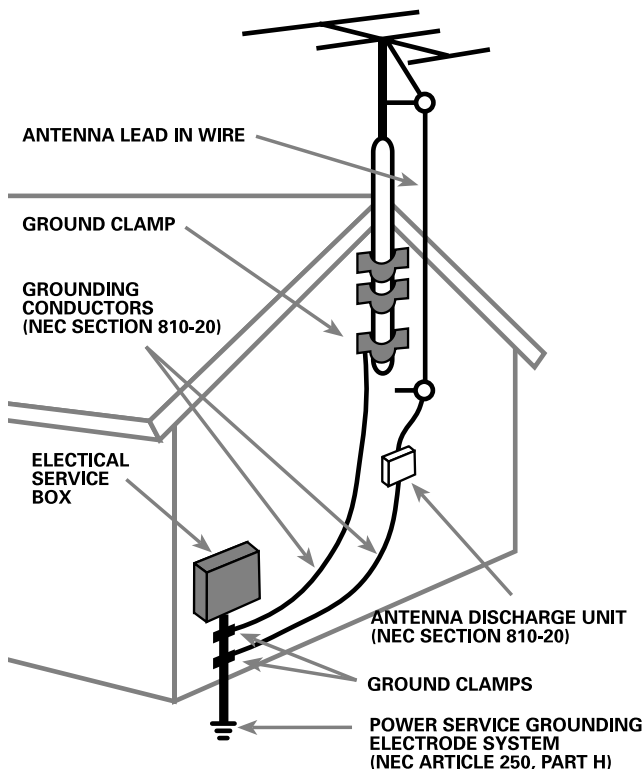
This symbol is to alert the user to the presence of uninsulated dangerous voltages inside the product's enclosure that may constitute a risk of electric shock.

This symbol is to alert the user to important operating and maintenance (service) instructions in this manual and literature accompanying the product.

ANTENNA GROUNDING ACCORDING TO
NATIONAL ELECTRICAL CODE INSTRUCTIONS
ARTICLE 810: "RADIO AND TELEVISION EQUIPMENT"

ANTENNA LEAD IN WIRE

GROUND CLAMP

GROUNDING CONDUCTORS (NEC SECTION 810-20)

ELECTICAL SERVICE BOX

ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)

GROUND CLAMPS

POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ARTICLE 250, PART H)

Important Safety Instructions

WARNING: There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose the unit to moisture or water. Do not allow foreign objects to get into the enclosure. If the unit is exposed to moisture, or a foreign object gets into the enclosure, immediately disconnect the power cord from the wall. Take the unit to a qualified service person for inspection and necessary repairs.

Read all the instructions before connecting or operating the component. Keep this manual so you can refer to these safety instructions.

Heed all warnings and safety information in these instructions and on the product itself. Follow all operating instructions.

Clean the enclosure only with a dry cloth or a vacuum cleaner.

You must allow 10 cm or 4 inches of unobstructed clearance around the unit. Do not place the unit on a bed, sofa, rug, or similar surface that could block the ventilation openings. If the unit is placed in a bookcase or cabinet, there must be ventilation of the cabinet to allow proper cooling.

Keep the component away from radiators, heat registers, stoves, or any other appliance that produces heat.

The unit must be connected to a power supply only of the type and voltage specified on the rear panel. (USA: 115 V/60Hz, EC: 230V/50Hz)

Connect the component to the power outlet only with the supplied power supply cable or an exact equivalent. Do not modify the supplied cable. Do not defeat grounding and/or polarization provisions. The cable should be connected to a 2-pin polarized wall outlet, matching the wide blade of the plug to the wide slot of the receptacle. Do not use extension cords.

Do not route the power cord where it will be crushed, pinched, bent, exposed to heat, or damaged in any way. Pay particular attention to the power cord at the plug and where it exits the back of the unit.

The power cord should be unplugged from the wall outlet if the unit is to be left unused for a long period of time.

Immediately stop using the component and have it inspected and/or serviced by a qualified service agency if:
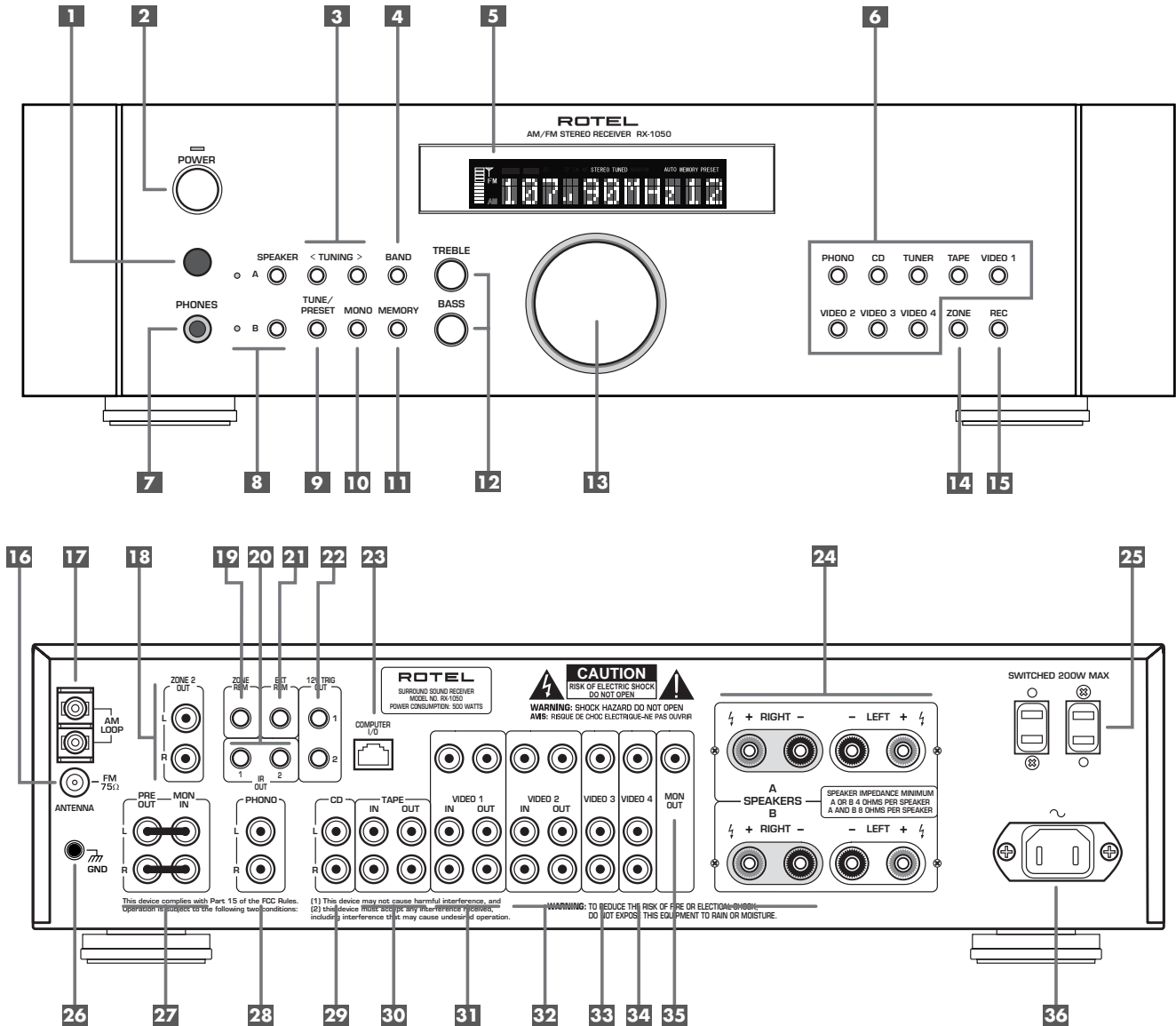
- The power supply cord or plug has been damaged.
- Objects have fallen or liquid has been spilled into the unit.
- The unit has been exposed to rain.
- The unit shows signs of improper operation
- The unit has been dropped or damaged in any way

NOTE TO CATV SYSTEM INSTALLER: Call the CATV system or antenna installer's attention to Article 820-40 of the NEC. This provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical. See installation diagram.
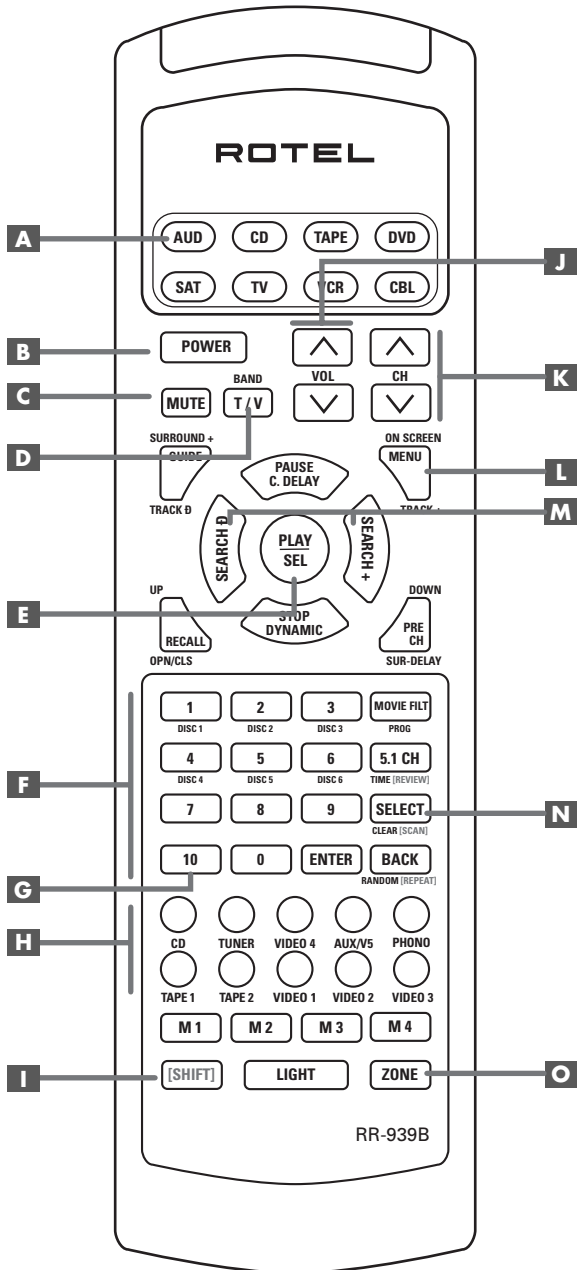
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference to radio or TV communications. There is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the unit and the television tuner.
- Connect the unit to an AC power outlet on a different electrical circuit.
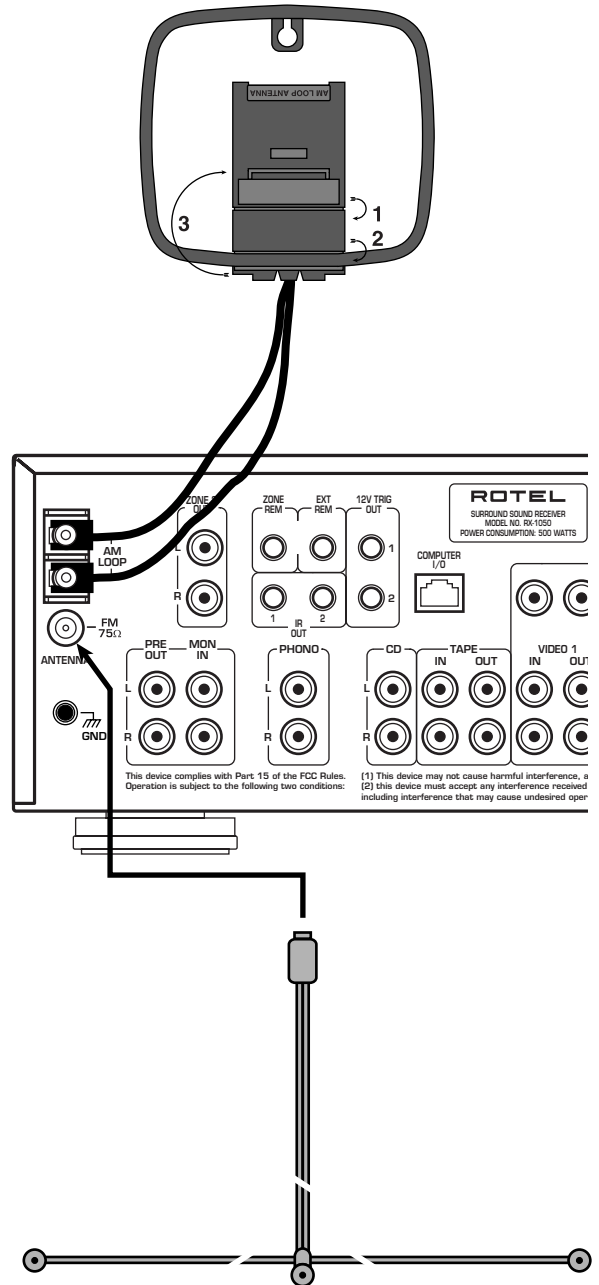- Consult your authorized Rotel retailer for assistance.
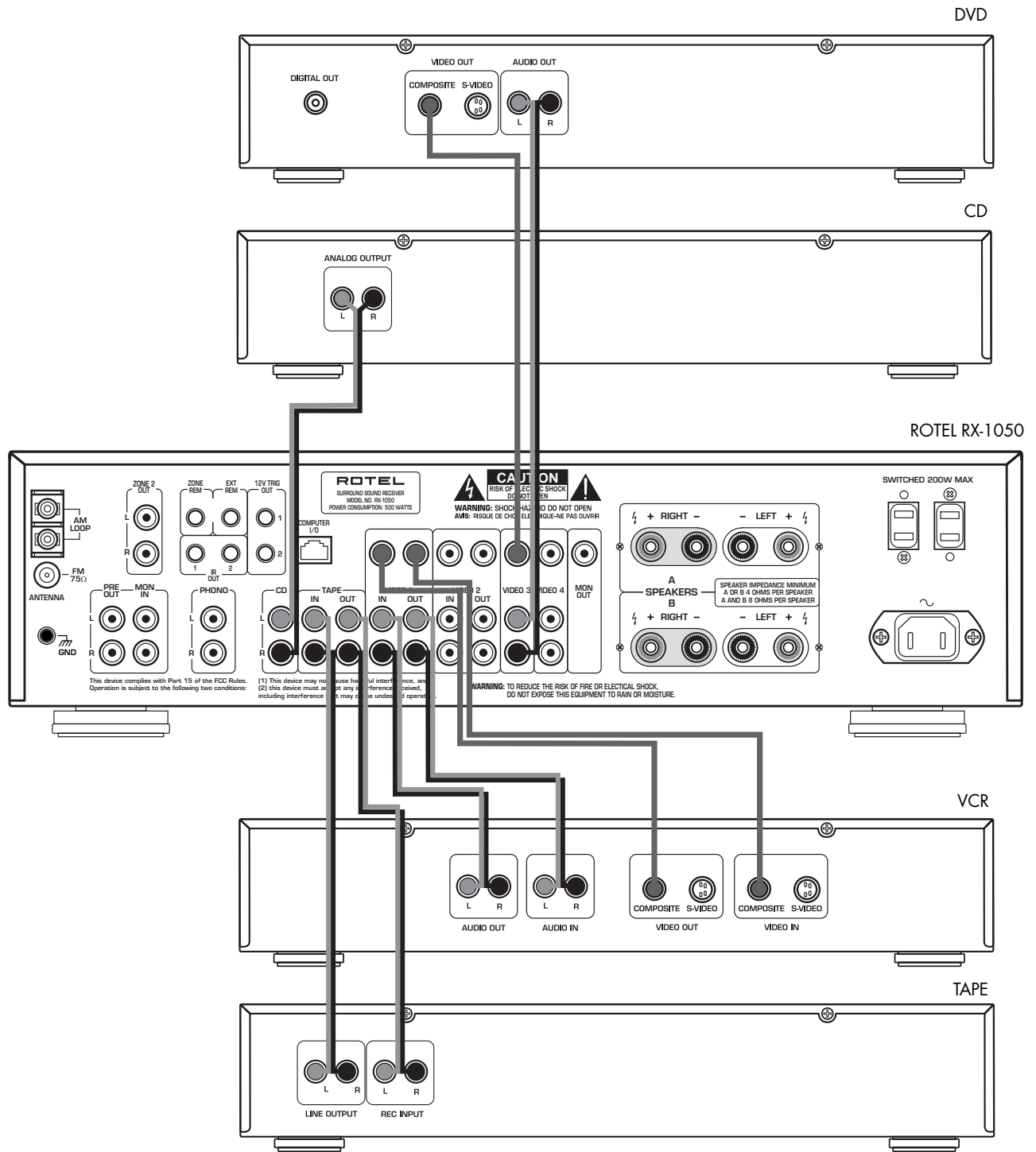
1: Controls and Connections
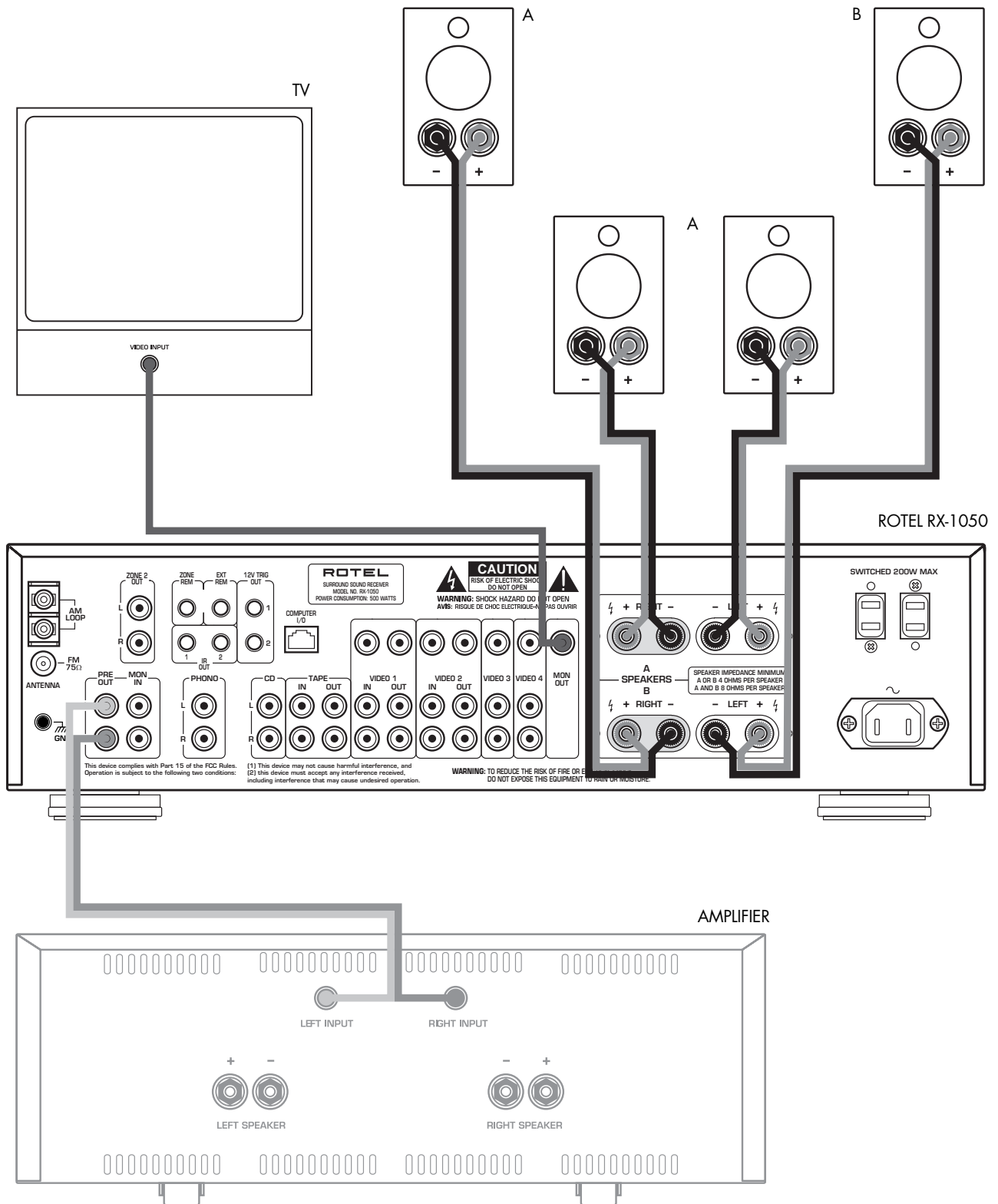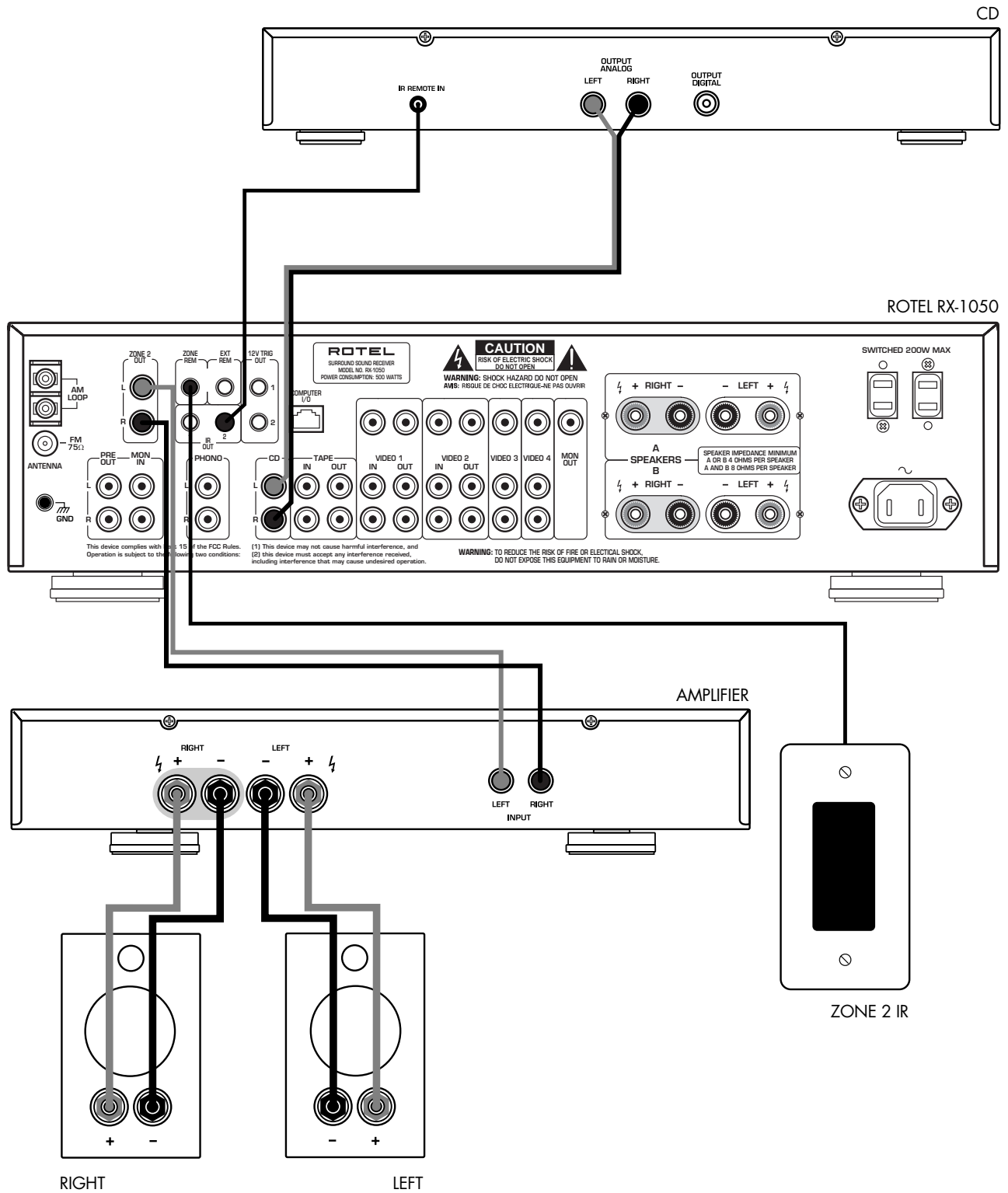
2: RR-939B Remote Control

3: Antenna Connections

4: Input Connections

DVD

CD

ROTEL RX-1050

VCR

TAPE

5: Output Connections

A

B

TV

A

ROTEL RX-1050

VIDEO INPUT

ROTEL
SURROUND SOUND RECEIVER
MODEL NO. RX-1050
POWER CONSUMPTION: 500 WATTS

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
WARNING: SHOCK HAZARD DO NOT OPEN
AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR

SWITCHED 200W MAX

ZONE 2
OUT
L
R

ZONE
REM
EXT
REM
12V TRIG
OUT
1
2

COMPUTER
I/O

IR
OUT
1   2

AM
LOOP

FM
75Ω

ANTENNA

GND

PRE
OUT
MON
IN

PHONO
L
R

CD

TAPE
IN   OUT
L
R

VIDEO 1
IN   OUT

VIDEO 2
IN   OUT

VIDEO 3

VIDEO 4

MON
OUT

+ RIGHT −   − LEFT +

A
SPEAKERS
B

+ RIGHT −   − LEFT +

SPEAKER IMPEDANCE MINIMUM
A OR B 4 OHMS PER SPEAKER
A AND B 8 OHMS PER SPEAKER

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) this device must accept any interference received,
including interference that may cause undesired operation.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK
DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE

AMPLIFIER

LEFT INPUT   RIGHT INPUT

+   −   −   +

LEFT SPEAKER   RIGHT SPEAKER

6: Zone 2 Connections

CD

ROTEL RX-1050

AMPLIFIER

ZONE 2 IR

RIGHT

LEFT

Contents

Boxed numbers refer to RX-1050 illustration.
Boxed letters refer to RR-939B illustration.

About Rotel

A family whose passionate interest in music led them to manufacture high fidelity components of uncompromising quality founded Rotel over 40 years ago. Through the years that passion has remained undiminished and the family goal of providing exceptional value for audiophiles and music lovers regardless of their budget, is shared by all Rotel employees.

The engineers work as a close team, listening to, and fine tuning each new product until it reaches their exacting musical standards. They are free to choose components from around the world in order to make that product the best they can. You are likely to find capacitors from the United Kingdom and Germany, semi conductors from Japan or the United States, while toroidal power transformers are manufactured in Rotel's own factory.

Rotel's reputation for excellence has been earned through hundreds of good reviews and awards from the most respected reviewers in the industry, who listen to music every day. Their comments keep the company true to its goal - the pursuit of equipment that is musical, reliable and affordable.

All of us at Rotel, thank you for buying this product and hope it will bring you many hours of enjoyment.

Getting Started

Thank you for purchasing the Rotel RX-1050 AM/FM Stereo Receiver. The RX-1050 is three products in one:

- Full-featured audio/video control center for analog audio and video source components

- A high-quality AM/FM tuner with 30 station presets, direct access tuning, and auto-tuning.

- A high power 2-channel amplifier.

Key Features

- Rotel's Balanced Design Concept combines advanced circuit board layout, comprehensive parts evaluation, and extensive listening tests for superior sound and long term reliability.

- Independent selection of source inputs for listening and recording.

- Zone 2 output with independent input selection and volume adjustments for multi-zone custom installations along with IR-repeater capability for operation from the remote zone.

- Customizable labels for source inputs.

- A and B speaker outputs

- Headphone output.

- Preout and Main In connections.

- Universal remote control to operate the RX-1050 and seven other components.

Unpacking

Remove the unit carefully from its packing. Look for the handheld remote control and other accessories. Save the packing and box as it will protect the RX-1050 if you move or need to return it for maintenance.

Placement

Place the RX-1050 on a solid, dry, level surface away from direct sunlight, excessive heat, high humidity, or strong vibrations.

The RX-1050 can generate considerable heat during normal operation. Do not block its ventilation openings. Allow a minimum of 10 cm (4 inches) of unobstructed open space around the unit. If installed in a cabinet, make sure that there is adequate ventilation.

Make sure the RX-1050 is close to the other components in your audio/video system and, if possible, place it on its own shelf. This will make initial cable routing, hookup, and any subsequent system changes easier. It also minimizes potential interference or heat buildup from other components.

Make sure there is enough room behind the RX-1050 for easy hookup. Remember, you are connecting many other components to this unit and you'll probably need more space than you think.

Don't stack other objects (components or other items) on top of the RX-1050. Don't let water fall into the RX-1050 as this could damage delicate circuitry.

We suggest you look over the RX-1050's front and rear panels before you start connecting other components. The explanations in this manual will help you get familiar with the unit's connections, features, and controls.

Most functions are duplicated on the front-panel and on the remote. A few are found only on one or the other. Throughout this manual, numbers in gray boxes refer to the RX-1050 illustration at the front of this manual. Letters refer to the RR-939B remote illustration. When both appear, the function is found on both the RX-1050 and the remote. When only one appears, that function is found only on the RX-1050 or the remote.

RR-939B Remote Control

The RX-1050 includes a handheld remote control that does far more than operate the RX-1050. The RR-939B is a full-function programmable remote control that can operate up to 8 audio/video components.

A separate manual, included with the remote, gives detailed information on programming and using the RR-939B to replace all of the remote controls in your system. This section is intended to provide only that information which pertains to the use of the RR-939B to operate the RX-1050.

NOTE: Many functions duplicate the RX-1050 front panel controls and are listed here only for your reference. Please refer to the previous Front Panel Controls section of this manual if you need additional information.

Operating the RR-939B
AUDIO Button [A]

To operate the RX-1050 with the remote, make sure that the AUDIO mode is active by pressing the AUD button on the remote before you start. If it is active, pressing command keys on the RR-939B will cause the AUDIO button to flash red. Once the AUDIO mode is active, it will stay active unless you press one of the other DEVICE buttons to control a different component.

Programming the RR-939B
[A] [F]

The RR-939B is preprogrammed from the factory to operate the RX-1050. Should the AUDIO command set on your RR-939B not operate the RX-1050, it's possible that the programming has been inadvertently changed. **To program the remote to operate the RX-1050, set the AUDIO Code = 001:**

1. Press the AUDIO [A] button at the top of the remote while simultaneously pressing the MUTE button and hold both for at least one second. The AUDIO button will light in red for 20 seconds, indicating that you have entered the program mode. The next step must be done within this 20 second period, or the RR-939B will revert to its standard operating mode.

2. Use the NUMERIC [F] buttons to enter the 3-digit code (001) for the RX-1050 – press 0, then 0, then 1. The AUDIO button will flash each time you enter a digit.

3. Store the code number by pressing the corresponding AUDIO button again. The button will blink twice to confirm the storage of the code in memory.

SHIFT Button [I]

The SHIFT button on the remote is used to access secondary functions on several RR-939B buttons. Press the SHIFT button and then the desired button.

Basic Controls

POWER Button [2] [B]

The front-panel POWER switch on the RX-1050 is a master power control. It must be pressed IN for the unit to operate. When it is in the OUT position, the unit is fully off and cannot be activated from the remote control. The POWER switch on the remote functions as a standby switch, activating or deactivating the unit. In standby mode, minimal power is still supplied to memory circuits to preserve settings. When the unit has AC power applied and the front-panel POWER button is pressed IN, the front-panel POWER LED lights, regardless of whether the unit is in standby mode or fully-activated in the main room. In normal operation, use the STANDBY switch to deactivate the unit when you are finished listening and leave the POWER switch ON at all times. This will preserve memory functions.

Remote Sensor [1]

This sensor receives infrared signals from the handheld remote control. Make sure you do not accidentally block this sensor with cables or accessories.

Front Panel Display [5]

The large fluorescent display in the upper portion of the RX-1050 provides status information used in operating the AM/FM receiver (such as station frequency display, band, preset memory, etc.).

MASTER VOLUME 13 J

The MASTER VOLUME control adjusts the level of all output channels simultaneously. Rotate the control clockwise to increase the volume. Rotate counterclockwise to decrease the volume. MASTER VOLUME buttons are also available on the RX-1050's handheld remote control.

When you adjust the volume, an indicator in the display shows the volume setting.

MUTE Button C

The MUTE button on the remote temporarily turns off the output signal. Push this button once to turn the sound off. A mute indication will appear in the front panel display. Press the MUTE button again to restore previous volume levels.

TONE Controls 12

BASS and TREBLE controls increase and decrease the audio signal's low and high frequency content respectively. Rotate clockwise to increase output in the respective frequency range and counterclockwise to reduce it. The center detent removes each control from the audio path for maximum signal integrity.

HEADPHONES Jack 7

This jack accepts a standard 1/4 inch stereo headphone plug. Use an adaptor if your headphones have a small mini-plug.

NOTE: Inserting a headphone plug does not automatically disable all speaker outputs. Use the SPEAKER buttons described in the next section to turn the speakers on or off during headphone listening.

SPEAKER Buttons and LEDs 8

The RX-1050 provides output connections for two pairs of speakers: A and B. A pair of SPEAKER buttons independently control which speaker outputs, if any, are active. Press the SPEAKER A button to activate or deactivate the SPEAKER A outputs. Press the SPEAKER B button to activate or deactivate the SPEAKER B outputs.

An LED indicator located to the left of each button lights when that speaker output is activated.

NOTE: For headphone listening, deactivate both the SPEAKER A and SPEAKER B outputs.

MEMORY Button 11

The MEMORY button is used to confirm and memorize tuner station presets. Its use is described in detail in the Tuning Controls section of this manual.

Input Source Buttons 6 H

Eight buttons on the right side of the front panel directly select an audio or video input source (PHONO, CD, TUNER, TAPE, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4) for listening. Push any of these buttons (or the duplicates on the handheld remote) to select the desired source. You will hear this source and, if you have selected a video source, see its picture on your TV monitor. The left side of the front panel display shows the current source selection.

The input source buttons can also be used (with the REC button 15 described in the next section) to select an analog input source signal to be available at the outputs for recording. Additionally, the input source buttons can be used with the ZONE button 14 to select an analog input source for ZONE 2.

REC Button 15
ZONE Button O

The RX-1050 can record from any source to a recorder connected to the TAPE, VIDEO 1, VIDEO 2 or VIDEO 3 outputs, even while listening to a different input source. To select an input source for recording, press the REC button on the front-panel (or the equivalent ZONE button on the remote). Then, press one of the INPUT SOURCE buttons within 5 seconds to select the signal you wish to record. After making your selection (or if more than five seconds passes), the input source buttons return to their normal function, selecting a listening source.

Remember, this selection is independent of the listening source. While recording, you may select a different source (for example, the built-in tuner) for listening. The record selection appears in the display to the right of the listening selection.

Tuning Controls

The RX-1050 features a digital synthesized AM/FM tuner with 30 station presets. Operation of the tuning functions involves the use of six buttons on the front panel plus the numeric and other buttons on the remote.

BAND Button 4
TV/BAND Button D

The BAND button on the front panel and the TV/BAND button on the remote selects AM or FM mode. Press either button to toggle back and forth between the two modes. An indicator at the left portion of the front panel display confirms your choice and the currently tuned station frequency is shown in the main portion of the display.

TUNING Buttons 3
CH TUNING Buttons K

The buttons labeled TUNING on the front panel or CH UP/DOWN on the remote control provide two different tuning functions, depending on the mode of operation.

In the normal FREQUENCY TUNING mode, press a TUNING button and release to manually jump up or down to the next station frequency, regardless of whether or not a station is broadcasting on that frequency. For auto scan tuning, press and hold the TUNING button for approximately one second. An AUTO indicator appears in the front panel display and the tuner begins automatically scanning up or down through the frequencies until the next available station is detected. If this is not the desired station, repeat the automatic tuning procedure to find the next station. Weak stations will be skipped during auto tuning.

In the PRESET TUNING mode, press a TUNING button and release to jump up or down to the next memorized station preset. Switch between FREQUENCY and PRESET tuning modes by pressing the SHIFT button I and then the BAND/TV button D on the remote control. A PRESET indicator appears in the display when PRESET TUNING is activated.

NOTE: Several indicators in the front panel display assist tuning. A large display shows the tuned frequency and increases or decreases during tuning. A TUNED indicator lights when a sufficiently strong signal is received. A ST indicator lights when a stereo FM signal is received.

TUNE/PRESET Button 9
[SHIFT] TV Button I D

The TUNE PRESET button toggles between FREQUENCY TUNING mode (the CH TUNING buttons advance to the next station frequency) and PRESET TUNING mode (the CH TUNING buttons advance to the next memorized station preset). To change modes, press the front panel TUNE PRESET button. To change modes using the remote, press the SHIFT button and then the TV button. A PRESET indicator in the front panel DISPLAY lights when the PRESET mode is active.

NUMERIC Buttons:
Station Presets F

The RX-1050 can store up to 30 station presets for recall at any time using the NUMERIC buttons on the remote control. To memorize a station:

1. Tune to the desired station, AM or FM.

2. Press the MEMORY button on the front panel. A MEMORY indicator flashes for five seconds in the front panel display.

3. While the MEMORY indicator is flashing, press the number of the preset where you wish to store the station frequency. For example, to memorize preset 3, press the 3 button. To memorize preset 15, press the 1 button followed by the 5 button.

4. A previously stored frequency is erased from memory when a new frequency is memorized for the same preset number.

To tune to a previously memorized station, just press the preset number on the NUMERIC buttons. For example, to tune to preset 3, press the 3 button. To tune to preset 15, press the 1 button and then press the 5 button.

NOTE: If the TUNER is not already the selected INPUT SOURCE, selecting a station preset will automatically switch to the TUNER input and tune the memorized station.

The NUMERIC buttons can also be used for direct access tuning (see below).

DIRECT FREQUENCY/10 Button
G

If you know the frequency of the desired station, you may tune it directly using the DIRECT FREQUENCY/10 button and the NUMERIC buttons F on the remote.

1. Press the DIRECT FREQUENCY/10 button to change the NUMERIC buttons from station preset to frequency direct mode. The station frequency in the front panel display change to a series of four bars, representing the digits of a station frequency, with the first bar flashing.

2. Enter the first digit of the station frequency using the NUMERIC buttons. The digit appears in the frequency display and the second bar flashes. Enter the remaining digits of the frequency. When all of the digits have been entered, the tuner automatically tunes to the displayed station frequency.

NOTE: On the USA version, pressing 1 in the FM mode will enter 10 as the digit in the frequency display. On the European version, it is necessary to press 1 and then 0 to enter 10. For US FM stations, press only one digit following the decimal point as shown in the first example below. For European FM stations, press two digits following the decimal point as shown in the second example.

EXAMPLES:

(USA FM) 87.50MHz	Press 8>7>5
(Europe FM) 87.50MHz	Press 8>7>5>0
(all AM) 1610kHz	Press 1>6>1>0

Preset Scanning
[SHIFT] MUTE Buttons I C

This shift function activates a PRESET SCANNING feature, playing each memorized preset station for five seconds before moving to the next. Using the remote, press the SHIFT button and then the MUTE button to begin scanning. To stop the PRESET SCANNING on the desired station, press the SHIFT button and then the MUTE button.

MONO Button ⑩

The MONO button changes the FM mode from stereo reception to mono reception. In stereo mode, a stereo signal will be heard if the station is broadcasting a stereo signal and there is sufficient signal strength. A stereo indicator lights in the front panel display. In mono mode, a mono signal will be heard even if the station is broadcasting a stereo signal.

NOTE: *Switching to mono mode can be a useful way to improve the reception of weak or distant FM signals. Less signal strength is required for clean mono reception than for stereo reception.*

FL Display Control

Turning the FL Display On/Off
SELECT Button Ⓝ

To turn the FL Display on or off, press the SELECT button on the remote control. When the display is off, pressing any control button will turn the display on for five seconds.

Custom Display Labels
MENU Button Ⓛ
SEARCH +/− Buttons Ⓜ
PLAY/SEL Button Ⓔ

You can program the RX-1050 to display custom names (up to five characters long) for each of the source inputs. For example, you could relabel VIDEO 1 as "VCR" or VIDEO 2 as "DVD". To program custom labels:

- Select the source input you wish to relabel so the current name appears in the display.

- Press and hold the MENU button Ⓛ on the remote until the characters in the display change to blinking solid blocks.

- Use the SEARCH +/− buttons Ⓜ on the remote to scroll through the character set. When the desired character displayed, press the PLAY/SEL button Ⓔ to confirm it and proceed to the next character.

- Repeat the previous step to select the remaining characters. After the last character is programmed and confirmed, the new name is saved automatically.

Once a custom label is programmed, the new name appears when that source is selected for either listening or recording. When the source is selected, the original label (VIDEO 1, VIDEO 2, etc.) appears, followed by the custom label.

Restoring the FL Display Labels
⑧ ⑨ ⑩ ②

To clear all custom labels and restore the original defaults, turn the RX-1050 off. Then, press and hold the SPEAKER B ⑧, TUNE/PRESET ⑨, and MONO ⑩ buttons while pressing the POWER button ② to ON.

Rear Panel Connections

The RX-1050 provides rear panel connections for four video sources, a CD, a tape deck, and a phono input for use with a turntable. These connections include standard RCA audio inputs and outputs plus composite video inputs and outputs.

The RX-1050 includes two pairs of speaker connections for the built-in power amplifier as well as RCA preamp outputs for use with external amplifiers. In addition, a composite video output connects the unit to your TV monitor.

NOTE: *DO NOT plug any system component into an AC source until system hookup is complete and you are confident that all component-to-component connections have been properly made.*

All video cables should have a 75 ohm impedance rating. Although conventional audio interconnects will pass a video signal, their construction and limited bandwidth impose a performance penalty because, in part, they do not adhere to the 75 ohm standard.

When making signal connections, make sure that you always preserve proper channel consistency, i.e. connect LEFT channels to LEFT channel jacks and RIGHT channels to RIGHT channel jacks. All RCA-type connections on the RX-1050 follow these standard color codes:

Left audio: RCA jack with white inset
Right audio: RCA jack with red inset
Video: RCA jack with yellow inset

Connect your audio-only source components to these RCA inputs and outputs:

Phono Inputs ㉘
Phono Ground ㉖

These inputs accept the signal from a standard moving magnet phono cartridge. Connect the left and right output cables of a turntable to this pair of RCA inputs. Connect the ground wire from your turntable to the phono ground lug, labeled GND.

CD Inputs ㉙

Connect the left and right analog outputs from a CD player to the RCA input jacks labeled CD.

Tape Inputs and Outputs ㉚

The RX-1050 provides a set of audio tape connections (labeled TAPE) with a pair of inputs and a pair of record outputs that provide a signal for recording.

Connect the left and right analog outputs from an audio tape deck to the TAPE IN input jacks. Connect the TAPE OUT output jacks to the INPUTS on the audio tape deck.

VIDEO 1 – 2
Inputs/Outputs ㉛ ㉜

There are groups of connections for up to four video source components. Each group includes a pair of RCA analog audio inputs at the bottom of the group and a composite video input at the top. Two of these groups (VIDEO 1 and VIDEO 2) also include a set of record outputs for sending audio and video signals to a VCR.

Connect your VCR to the VIDEO 1 group of inputs and outputs. This set of connections allows recording.

Connect the analog audio **outputs** of the VCR to the VIDEO 1 IN left and right RCA audio jacks. Connect the VIDEO 1 OUT left and right RCA audio output jacks to the audio **inputs** on the VCR.

Connect the RCA composite video **output** of the VCR to the RCA composite video **input** labeled VIDEO 1 PLAY.

Hookup the VIDEO 1 REC video output to the RCA composite video recording input on your VCR.

Repeat for a second VCR video components, using the connections for VIDEO 2.

VIDEO 3 – 4 Inputs ▨33 ▨34

These two audio/video inputs allow connection of additional video components such as a play-only VCR, DVD player, LaserDisc player, or DSS satellite receiver. There are no outputs for sending a record out signal to these components.

Connect the RCA analog audio outputs of the video component to the left and right RCA analog audio inputs labeled VIDEO 3. Then, connect the RCA composite video output of the video source to the corresponding RCA composite connection labeled VIDEO 3.

Repeat using the VIDEO 4 connections for an additional play only video component.

NOTE: *Any of the video source inputs may also be used for an audio-only source. Simply omit the video connection.*

TV Monitor Output ▨35

The video output of the RX-1050 sends the video signal to your TV monitor. Connect the TV MONITOR output to an RCA composite video input on your television monitor. Whatever input source is selected on the RX-1050 will appear on screen.

Speaker Outputs ▨24

The RX-1050 has a built-in stereo amplifier for driving left and right speakers. There are two pairs of connections on the back panel which allow you to connect two pairs of speakers (A and B) and select them with front-panel buttons.

NOTE: *The combined speaker impedance must be a minimum of 4 ohms. If you are driving just one pair of speakers (A or B connections), use speakers with a nominal impedance of 4 ohms or higher. If you are driving two pairs of speakers (A and B) simultaneously, use speakers rated at 8 ohms or higher.*

There are two sets of binding post connections (one pair for SPEAKERS A and one for SPEAKERS B) which accept bare wire, spade lugs, or banana plug connectors (in some markets).

Each pair of connectors is color-coded for polarity: red for positive and black for negative. All speakers and all speaker wire is also marked for polarity. For proper performance, you must maintain this polarity at all speaker connections. Always connect the positive terminal of each speaker to the corresponding red speaker terminal on the RX-1050 and the negative speaker terminal to the corresponding black connector on the RX-1050.

Route the wires from the RX-1050 to the speakers. Leave enough slack so you can move the components to allow access to the speaker connectors. If you are using banana plugs, connect them to the wires and then plug into the backs of the binding posts. The collars of the binding posts should be screwed in all the way (clockwise). If you are using terminal lugs, connect them to the wires. If you are attaching bare wires directly to the binding posts, separate the wire conductors and strip back the insulation from the end of each conductor. Be careful not to cut into the wire strands. Unscrew the binding post collars. Place the connector lug or the twisted bare wire around the binding post shaft. Turn the collars clockwise to clamp the connector lug or wire firmly in place.

NOTE: *Be sure that no loose wire strands can touch adjacent wires or connectors.*

PRE OUT/MAIN IN ▨27

The RX-1050 provides a pair of variable-level RCA preamp audio outputs and a pair of RCA amplifier inputs that allow you to use external amplifiers in place of, or in addition to, the built-in amplifiers.

NOTE: *The preamp outputs are connected to power amplifier inputs with jumpers in a standard PRE OUT/MAIN IN configuration. To disable the built-in power amplifiers and use external amplifiers, remove these jumpers. Save them for future use.*

To hook up the RCA audio outputs to an external amplifier, connect a standard audio cable from each output to the input of the amplifier channel that will power the corresponding speaker.

Antenna Connections

The RX-1050 requires two antennas to receive radio signals, one for AM and one for FM. Most users will get acceptable reception using the indoor antennas which are supplied with the RX-1050. Instructions for hooking up these antennas follow.

NOTE: *If you are located a long distance from the radio transmitters, you may use an outdoor antenna to improve reception. Outdoor antenna systems can be dangerous if they are not properly grounded and should be installed by a professional contractor familiar with the electrical code requirements in your local area.*

AM Loop Antenna ▨17

The RX-1050 includes a loop antenna to receive AM radio signals. Remove this antenna from the box and locate it near the RX-1050.

Connect the 300 ohm twin-conductor wire from the loop antenna to the pair of screw terminals labeled AM LOOP, attaching one wire to each terminal. It does not matter which wire attaches to which terminal, but make sure that the connections are solid and that the two wires do not touch.

You may need to rotate or otherwise reorient the antenna to find the best position.

NOTE: *To use an outdoor antenna, connect its 300 ohm twin-conductor wire to the AM terminals in place of the loop antenna, only after a professional contractor has installed the antenna system in accordance with local electrical codes.*

FM Wire Antenna ▨16

The RX-1050 is supplied with a T-shaped indoor FM antenna. Connect the attached coax F-type plug to one of the FM antenna connectors on the RX-1050. For best reception, unfold the T-shaped antenna. Eyelets at both ends of the T allow tacking the antenna to a wall, if desired. Experiment with positioning for best reception.

NOTE: *To use an outdoor antenna, connect its 75 ohm coax lead wire to the FM connector instead of the indoor wire antenna, only after a professional contractor has installed the antenna system in accordance with local electrical codes.*

AC Power Connections

AC Input 36

Your RX-1050 is configured at the factory for the proper AC line voltage in the country where you purchased it (USA: 115 volts/60Hz AC or CE: 230 volts /50 Hz AC). The AC line configuration is noted on a decal on the back of your unit.

Plug the supplied cord into the AC INPUT receptacle on the back of the unit.

See the POWER SWITCH heading in the BASIC CONTROLS section of this manual for information about turning the unit on and off.

NOTE: *Memorized settings and labels will be stored for up to one month if the RX-1050 is disconnected from AC power.*

Accessory Power Outlets 25 (North American version)

The RX-1050 has two switched outlets on the back panel. Power is available from these outlets when the RX-1050 is turned on. These outlets can provide up to a total of 200 watts. They are appropriate for supplying power to signal sources, such as CD players, tuners, or tape decks. They should not be used for power amplifiers. Connecting components that will draw more than 200 watts to these outputs could damage the RX-1050.

12V TRIGGER Connections 22

Several Rotel amplifiers offer the option of turning them on and off using a 12 volt trigger signal. These two connections provide this 12 volt trigger signal. When the RX-1050 is activated, a 12 volt DC signal appears at these connectors and will turn on amplifiers. When the RX-1050 is put in STANDBY mode, the trigger signal is interrupted and the amplifiers will turn off.

Miscellaneous Connections

EXTERNAL REM IN 21

This 3.5 mm mini-jack (labeled EXT REM IN) receives command codes from an industry-standard infrared receivers (Xantech, etc.) located in the main listening room. This feature is useful when the unit is installed in a cabinet and the front-panel sensor is blocked. Consult your authorized Rotel dealer for information on external receivers and the proper wiring of a jack to fit the mini-jack receptacle.

NOTE: *The IR signals from the EXTERNAL REMOTE IN jack (as well as those from the ZONE REMOTE IN jack) can be relayed to source components using external IR emitters or hard-wired connections from the IR OUT jacks. See the ZONE 2 section of this manual for additional information.*

COMPUTER I/O Input 23

The RX-1050 can be operated with a personal computer running audio system control software from third-party developers. This control is accomplished by sending operating codes (normally sent by the RR-939B remote control) from the computer via a hard-wired network connection.

The COMPUTER I/O input provides the necessary network connections on the back panel. It accepts standard RJ-45 8-pin modular plugs, such as those commonly used in 10-BaseT UTP Ethernet cabling.

For additional information on the connections, software, and operating codes for computer control of the RX-1050, contact your authorized Rotel dealer.

Zone 2 Connection and Operation

The RX-1050 provides Zone 2 multi-room capability, allowing you to enjoy music and operate the system from a second room. From the remote location, you can select a source component (even if different from the source playing in the main listening room), adjust the volume level in the remote zone, and operate the source components.

To use the Zone 2 capability, you need additional components: a pair of speakers installed in the remote zone, an amplifier to drive them, and a third-party IR repeater system.

Zone 2 can be controlled from the main room using RX-1050's front-panel ZONE button. Operation from the remote zone requires the installation of an infrared repeater system (Xantech, Niles, etc.) which relays infrared remote control commands from Zone 2 to the ZONE REMOTE IN input on the back of the RX-1050.

Several points to keep in mind about the Zone 2 function:

• An infrared repeater system (Xantech, Niles, et al) is required for operation from the remote zone.

• The RR-939B remote control supplied with the RX-1050 will operate Zone 2 if used with a repeater system from the remote zone. It can also be programmed to operate Rotel source components via the RX-1050's IR OUT jack.

• Any source component connected to the RX-1050's inputs can be sent to the Zone 2 outputs. ZONE 2 operates independently of the main room. You can select a different source or adjust Zone 2 volume without affecting the MAIN outputs in any way.

• Avoid sending the same infrared command to the RX-1050 front-panel sensor and a Zone 2 repeater at the **same** time. This means that Zone 2 **must** be in a different room from the RX-1050.

Zone 2 Power On/Off Operation

Once master power is applied to the unit by pressing the front-panel POWER button, the RX-1050 provides independent power on/off operation for both zones. Pressing the remote control POWER button in the main room activates or deactivates the RX-1050 in the main room only and has no effect on Zone 2. Conversely, activating or deactivating Zone 2 has no effect on the main listening room. However, placing the front-panel POWER button in the OFF position completely shuts off the unit, for both zones.

Controlling Zone 2 from the Main Room ZONE Button 14

You can control Zone 2 from the front-panel of the RX-1050 – activate or deactivate Zone 2, change input sources, and adjust the volume. Controlling Zone 2 from the front-panel is accomplished by pressing the ZONE button, which temporarily puts the RX-1050 in Zone 2 control mode, even if the unit is in standby mode. When the ZONE button is pressed, the FL DISPLAY shows the current status of ZONE 2 for ten seconds, during which time you can use the VOLUME control and INPUT SOURCE buttons to change the ZONE 2 settings. When ZONE 2 is active, the POWER LED flashes. When ZONE 2 is off, the POWER LED is steadily lit.

NOTE: *Zone 2 cannot be controlled from the remote in the main room.*

To turn Zone 2 on or off:

1. Press the front-panel ZONE button. The status of Zone 2 appears in the display. If Zone 2 is in standby, "ZONE OFF" appears. If Zone 2 is active, "ZONE xxxxx" showing the current input source appears.

2. If Zone 2 is ON, pressing the ZONE button a second time within 10 seconds turns it OFF. If Zone 2 is OFF, the second press of the ZONE button turns it ON with the last used input source and volume setting.

3. Following 10 seconds with no commands, the RX-1050 reverts to normal operation.

To change the Zone 2 input source:

1. Press the front-panel ZONE button. The status of Zone 2 appears in the display. Make sure that Zone 2 is ON.

2. Within 10 seconds after pressing the ZONE button, press one of the INPUT SOURCE buttons to select a new source for Zone 2. The name of the selected source appears in the display.

3. Following 10 seconds with no commands, the RX-1050 reverts to normal operation.

To change the Zone 2 volume:

1. Press the front-panel ZONE button. The status of Zone 2 appears in the display. Make sure that Zone 2 is ON.

2. Within 10 seconds after pressing the ZONE button, adjust the volume control to change the Zone 2 output level. The new setting appears in the display.

3. Following 10 seconds with no commands, the RX-1050 reverts to normal operation.

Controlling Zone 2 from the Remote Location

With a properly configured IR repeater system, you have full control of Zone 2 using an RR-939B remote from the Zone 2 location. You can select and operate a source, adjust the volume, and turn Zone 2 on or off. Whatever commands you send from the RR-939B will change Zone 2 and only Zone 2, just as if you were controlling a totally independent audio system in that room. These changes will have no effect on the main listening room.

To turn Zone 2 on or off, press the POWER button B on the remote. To adjust the volume in Zone 2, press the VOLUME buttons J on the remote. To select a different analog input source, press one of the INPUT SOURCE buttons H on the remote.

When the TUNER source is not selected in the main room, you can also access the tuner functions (Preset, Tuning Up/Down, Direct Preset Channel Selection, etc.) from ZONE 2. This feature is not available when the TUNER source is active in the main room to avoid interrupting someone else's listening by changing the station.

Zone 2 Audio Outputs 18

See Figure 6.

These line-level RCA outputs send the Zone 2 audio signal to a stereo amplifier driving a pair of speakers in the remote zone.

Although you have the option of using an integrated amplifier or a receiver to power the remote speakers, we suggest using a fixed-gain power amplifier. This simplifies system installation and operation. Your authorized Rotel dealer may make another recommendation based on specific system requirements.

To configure your system for Zone 2 operation, connect the left and right Zone 2 *outputs* on the RX-1050 to the left and right channel *inputs* of the amplifier powering the remote speakers, using standard RCA audio cables.

NOTE: *The Zone 2 outputs provide a VARIABLE level signal, with control of the volume from the RX-1050 front-panel and/or remote control from Zone 2.*

ZONE REM IN Jack 19

See Figure 6.

This 3.5 mm mini-jack accepts signals from a infrared repeater located in Zone 2. A third-party IR repeater system is required for operation of the RX-1050's ZONE 2 functions from the remote zone.

NOTE: *ZONE 2 and its IR repeater must be in a different location than RX-1050 to prevent IR commands intended to control Zone 2 from inadvertently controlling the main room operations.*

IR OUT Jacks [20]

See Figure 6.

The IR OUT 1 & 2 jacks send IR signals received at the ZONE REM IN jack or the EXTERNAL REM IN jack to an infrared emitter placed in front of a source component or to Rotel CD players, cassette decks, or tuners with a compatible rear panel IR connector.

This output is used to allow IR signals from Zone 2 to be sent to the source components, or to pass along IR signals from a remote in the main room when the sensors on the source components are blocked by installation in a cabinet. See your authorized Rotel dealer for information on IR repeater systems.

NOTE: *The EXT REM IN jack located to the right of these jacks is for use with an external IR sensor duplicating the front-panel IR sensor and located in the primary zone. It should* **not** *be used for ZONE 2 IR connections.*

Protection Circuit

A thermal protection circuit protects the amplifier against potential damage in the event of extreme or faulty operating conditions. Unlike many designs, the RX-1050's protection circuit is independent of the audio signal and has no impact on sonic performance. Instead, the protection circuit monitors the temperature of the output devices and shuts down the amplifier if temperatures exceed safe limits.

Should a faulty condition arise, the amplifier will stop playing. If this happens, turn the amplifier off, let it cool down for several minutes, and attempt to identify and correct the problem. When you turn the amplifier back on, the protection circuit will automatically reset.

Specifications

Audio

Continuous Amplifier Power
100 watts/channel
(20–20k Hz, <0.05% THD, 8 ohms)

Total Harmonic Distortion
<0.05% at rated power

Intermodulation Distortion (60 Hz:7 kHz)
<0.05% at rated power

Frequency Response
Line Level: 10 Hz - 70 kHz, ±3 dB
Phono: 20 Hz - 20 kHz, ±1 dB

Signal to Noise Ratio (IHF "A" weighted)
Line Level: 92 dB
Phono: 74 dB

Input Overload
Line Inputs: 5 V
Phono Inputs: >120 mV

Preamplifier Output Voltage
1.0 V (160 mV Input)

Input Sensitivity/Impedance
Line Level: 160 mV/47 kohms
Phono: 2.5 mV/47 kohms

Tone Controls (Bass/Treble)
±8 dB at 100 Hz/10 kHz

Video

Frequency Response
3 Hz-10 MHz, ± 3 dB

Signal to Noise Ratio
45 dB

Input Impedance
75 ohms

Output Impedance
75 ohms

Output Level
1 volt

FM Tuner

Usable Sensitivity
14.2 dBf

50dB Quieting Sensitivity
20.2 dBf (mono)
45.3 dBf (stereo)

Signal to Noise Ratio (at 65 dBf)
70 dBf (mono)
65 dBf (stereo)

Harmonic Distortion (at 65 dBf)
0.3% (mono)
0.5% (stereo)

Frequency Response
30 Hz-14 kHz, ±1.5 dB

Capture Ratio
2.0 dB

Alternate Channel Selectivity
47 dB (±400 kHz)

Spurious Response Ratio
80 dB

Image Response Ratio
65 dB

IF Response Ratio
80 dB

AM Suppression Ratio
52 dB

Stereo Separation (100Hz/1 kHz/10 kHz):
40 dB/45 dB/35 dB

Output level
1.3 V

Antenna Input
75 ohms unbalanced

AM Tuner

Sensitivity
500 µV/m

Selectivity
25 dB

Image Response Ratio
35 dB

Signal to Noise Ratio
40 dB

Output level
250 mV

Antenna Input
Loop Antenna

General

Power Consumption
300 watts

Power Requirements (AC)
115 volts, 60 Hz (USA version)
230 volts, 50 Hz (European version)

Weight
10.3 Kg/22.7 lb.

Dimensions (W x H x D)
432 x 121 x 359 mm
17" x 43/4" x 141/8"

**Front Panel Height
(feet removed/for rack mount)**
176 mm / 7"

All specifications are accurate at the time of printing.

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